

## Dynamic Design: The Cleanroom

## Cleanroom Technology: NASA Genesis Mission

### STUDENT ACTIVITY

#### PROCEDURE

##### 1. Word association.

Your teacher will ask you to write down the first thing you think of when you hear two words. In the space below, write down the words and your response:

Word 1 \_\_\_\_\_

Response \_\_\_\_\_

Why you wrote the response:

Word 2 \_\_\_\_\_

Response \_\_\_\_\_

Why you wrote the response:

##### 2. What happens to the dust when you dust the furniture?

##### 3. Write down the type of environment that is the cleanest. Why does this place need to be so clean?

##### 4. Once you have had a chance to work with your group, write down the group response for the cleanest area.



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5. As you watch the Genesis mission cleanroom video, respond to the following questions in your own words:

a) Describe the size of a micron.

b) How is contamination measured?

c) Write down the number of micron-sized particles that pass through a cubic foot of air per minute for the following places:

home \_\_\_\_\_

school \_\_\_\_\_

hospital \_\_\_\_\_

operating room \_\_\_\_\_

Genesis cleanroom \_\_\_\_\_

d) Describe laminar flow. You may draw a picture.

e) Describe the difference between ULPA and HEPA filters.

f) What is done to prevent the largest cause of contamination in the Genesis cleanroom?

g) Describe two ways that particulate contamination are measured in the Genesis cleanroom.

h) Think of other industries that may use a cleanroom or reasons why a cleanroom would be needed.